What is claimed is:

1. An assay for identifying a compound as an HIV inhibitor, said assay comprising

a) contacting a cell-derived protein selected from the group consisting of SH2-containing inositol 5-phosphatase, guanine nucleotide binding protein beta polypeptide 2-like 1, arginyl tRNA synthetase, ABC transporter, cell division cycle 42 GTP-binding protein, cyclosporin-A 19, src kinase p59, cathepsin B, cathepsin L and glutaredoxin with the compound;

b) comparing a biological activity of the cell derived protein in the presence and absence of the compound; and

c) identifying a compound as an HIV inhibitor if the biological activity is reduced in the presence of the compound.

2. The assay of Claim 1, wherein said cell-derived protein is encoded by the complementary sequence of a nucleic acid sequence selected from the group consisting of: SEQ ID NO:96, SEQ ID NO:98, SEQ ID NO:100, SEQ ID NO:102, SEQ ID NO:104, SEQ ID NO:106, SEQ ID NO:108, SEQ ID NO:110, SEQ ID NO:112, SEQ ID NO:114, and homologs thereof.

3. The assay of Claim 2, wherein said complementary sequence corresponds to a less than full length fragment of a gene that encodes a protein selected from the group consisting of SH2-containing inositol 5-phosphatase, guanine nucleotide binding protein beta polypeptide 2-like 1, arginyl tRNA synthetase, ABC transporter, cell division cycle 42 GTP-binding protein, cyclosporin-A 19, src kinase p59, cathepsin B, cathepsin L, glutaredoxin and homologs thereof.

4. The assay of Claim 1, wherein said cell-derived protein is contained in a cell.

5. The assay of Claim 4, wherein said cell is selected from the group consisting of a HIV-infected cell and a HIV-susceptible cell.

6. An assay for identifying a HIV inhibitor, said assay comprising

a) contacting a cell expressing a nucleic acid molecule encoding a protein selected from the group consisting of SH2-containing inositol 5-phosphatase, guanine nucleotide binding protein beta polypeptide 2-

like 1, arginyl tRNA synthetase, ABC transporter, cell division cycle 42 GTP-binding protein, cyclosporin-A 19, src kinase p59, cathepsin B, cathepsin L and glutaredoxin with the compound;

b) comparing expression levels of the protein in the presence and absence of the compound;

c) identifying a compound as an HIV inhibitor if expression of the protein is reduced in the presence of the compound.

7. The assay of Claim 6, wherein said cell-derived nucleic acid molecule comprises the complementary sequence of a nucleic acid sequence selected from the group consisting of: SEQ ID NO:96, SEQ ID NO:98, SEQ ID NO:100, SEQ ID NO:102, SEQ ID NO:104, SEQ ID NO:106, SEQ ID NO:108, SEQ ID NO:110, SEQ ID NO:112, SEQ ID NO:114, and homologs thereof.

8. The assay of Claim 7, wherein said complementary sequence corresponds to a less than full length fragment of a gene that encodes a protein selected from the group consisting of SH2-containing inositol 5-phosphatase, guanine nucleotide binding protein beta polypeptide 2-like 1, arginyl tRNA synthetase, ABC transporter, cell division cycle 42 GTP-binding protein, cyclosporin-A 19, src kinase p59, cathepsin B, cathepsin L, glutaredoxin and homologs thereof.

9. A recombinant expression construct comprising a nucleic acid having a nucleotide sequence according to Claims 6 or 8, wherein the construct is capable of expressing the receptor in a transformed culture of eukaryotic or prokaryotic cells.

10. A genetically-engineered host cell containing the recombinant expression construct of claim 9.

11. The assay of Claim 6, wherein said cell-derived nucleic acid is contained in a cell.

12. The assay of Claim 11, wherein said cell is selected from the group consisting of a HIV-infected cell and a HIV-susceptible cell.

13. The assay of Claim 11, wherein said cell is a genetically-engineered host cell according to claim 10.

14. A method for selecting a HIV inhibitor, comprising:

(a) exposing a cell expressing a nucleic acid molecule encoding a protein selected from the group consisting of SH2-containing inositol 5-phosphatase,

guanine nucleotide binding protein beta polypeptide 2-like 1, arginyl tRNA synthetase, ABC transporter, cell division cycle 42 GTP-binding protein, cyclosporin-A 19, src kinase p59, cathepsin B, cathepsin L and glutaredoxin to a putative inhibitory compound;

(b) measuring the expression of said nucleic acid molecule in said cell; and

(c) determining if said putative inhibitory compound down-regulates expression of said nucleic acid molecule.

15. The method of Claim 14, wherein said cell is cultured under conditions suitable for expression of said nucleic acid molecule in said cell.

16. The method of Claim 14, wherein said cell is selected from the group consisting of a HIV-infected cell and a HIV-susceptible cell.

17. The method of Claim 14, wherein said putative inhibitory compound is exposed into said cell *in vitro*.

18. The method of Claim 14, wherein said putative inhibitory compound is exposed to said cell *in vivo*.

19. The method of Claim 14, wherein step (c) further comprises determining levels of mRNA transcribed from said nucleic acid molecule before and after exposing the cell to the putative inhibitor compound according to step (a).

20. A method for selecting a HIV inhibitor, comprising:

(a) exposing a cell to a putative inhibitory compound, wherein said cell contains a biologically active form of a protein selected from the group consisting of SH2-containing inositol 5-phosphatase, guanine nucleotide binding protein beta polypeptide 2-like 1, arginyl tRNA synthetase, ABC transporter, cell division cycle 42 GTP-binding protein, cyclosporin-A 19, src kinase p59, cathepsin B, cathepsin L and glutaredoxin;

(b) measuring the activity of said protein in said cell; and

(c) determining if said putative inhibitory compound interferes with the activity of said protein.

21. The method of Claim 20, wherein said cell is selected from the group consisting of a HIV-infected cell and a HIV-susceptible cell.

22. The method of Claim 20, wherein said putative inhibitory compound

is exposed to said cell *in vitro*.

23. The method of Claim 20, wherein said putative inhibitory compound is exposed to said cell *in vivo*.

24. The method of Claim 20, wherein said cell is cultured in conditions suitable for production of an active form of said protein.

25. The method of Claim 20, wherein step (c) further comprises determining if a substrate for said protein is modified.

26. A method to identify a biological pathway involved in HIV infection comprising

(a) producing an expression library of nucleic acid molecule fragments from a nucleic acid molecule encoding a member of a biological pathway that includes a protein selected from the group consisting of NADH dehydrogenase, 2-oxoglutarate dehydrogenase, M2-type pyruvate kinase/ cytosolic thyroid hormone binding protein, calnexin, ADP-ribosylation factor 3, eukaryotic initiation factor 3, protein tyrosine phosphatase, herpesvirus-associated ubiquitin-specific protease, eukaryotic initiation factor 4B, CD44, phosphatidyl-inositol 3 kinase, elongation factor 1 alpha, bone morphogenic protein-1, double-strand break DNA repair gene protein, rat guanine nucleotide releasing protein, anti-proliferative factor (BTG-1), lymphocyte-specific protein 1, protein phosphatase 2A, squalene synthetase, eukaryotic release factor 1, GTP binding protein, importin beta subunit, cell adhesion molecule L1, U-snRNP associated cyclophilin, recepin, Arg/Abl interacting protein (ArgBP2A), keratin related protein, p18 protein, p40 protein, glucosidase II, alpha enolase, macrophage inflammatory protein 1 alpha, tumor protein translationally-controlled 1 (TCTP1), BBC1, Nef interacting protein, Na^+-D-glucose cotransport regulator gene protein, hsp90 chaperone protein, FK506-binding protein A1, Rox, beta signal sequence receptor, tumorous imaginal disc protein, cell surface heparin binding protein, SH2-containing inositol 5-phosphatase, guanine nucleotide binding protein beta polypeptide 2-like 1, arginyl tRNA synthetase, ABC transporter, cell division cycle 42 GTP-binding protein, cyclosporin-A 19, src kinase p59, cathepsin B, cathepsin L and glutaredoxin;

(b) transferring said expression library into host cells;

(c) infecting the cell with HIV or inducing expression of latent HIV genes in said host cells;

(d) selecting the cells not infected by HIV or that express a reduced amount of latent HIV genes or gene products by measuring levels of an HIV-specific detectable marker in said cells;

(e) identifying the nucleic acid molecules in said cells from the expression library and

(f) identifying the biological pathway which comprise genes corresponding to said nucleic acid molecules.

27. The method of Claim 26, wherein said cells contain an inducible latent HIV provirus.

28. The method of Claim 26, wherein said host cells are OM10.1.

29. The method of Claim 26, wherein said host cells are induced by TNF-α.

30. The method of Claim 26, wherein said marker is selected from the group consisting of cellular CD4, viral protein p24, viral protein gp120.